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**Guide to Using MIR / DW**

# **DAFIS Management Information Reporting / Data Warehouse**

**April 1997**



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# **Chapter 1 - Introduction**

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## **1.1. Purpose**

A significant need and desire is present to provide Departmental Accounting and Financial Information System (DAFIS) users with the ability to browse, retrieve, consolidate, analyze, and present information that resides in the DAFIS database. This initial phase of the DAFIS Management Information Reporting / Data Warehouse ( DAFIS MIR / DW) has been developed to provide immediate access to current financial data in a flexible and usable format. The DAFIS MIR / DW is valuable to the Department of Transportation (DOT). It offers these significant advantages:

- Centralized, universal access to the users' financial information
- Quick and easy use
- Capability to address critical user needs

The DAFIS MIR / DW will satisfy many user recommendations for DAFIS Phase II and a number of System Change Requests (SCRs).

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## **1.2. Security**

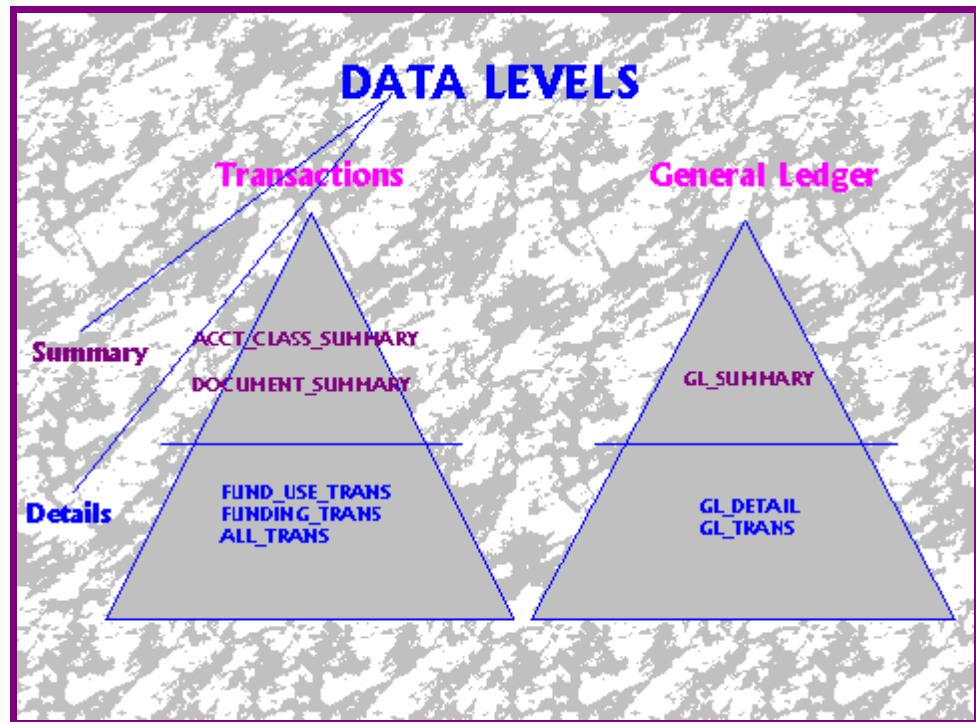
User access at each Administration is based on DAFIS Mainframe security and each user must, at the very least, have DAFIS inquiry access as approved by their Security Officer.

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## **1.3. Source of DAFIS MIR / DW Data**

The DAFIS MIR / DW user survey revealed that while the users have a need for summarized information, they also have a need for transaction level details. Furthermore, they want the capability to see the details which comprise the summary. Based on this need, transaction level detail is the foundation of the DAFIS MIR / DW and has been used to populate the database. The Batch Control File (BCF) is the only complete source of processed transaction level detail; therefore, it is the source of information for the DAFIS MIR / DW. From the BCF, the database has been populated with the details of all DAFIS processed transactions since July 1, 1995. The database is updated daily with data available

for download and query. No historical data has been loaded for the initial phase. After the initial phase, the feasibility of adding historical data to the database will be evaluated. In addition to transaction level details, the DAFIS MIR / DW database contains DAFIS table data. This data may be used to translate accounting code to English which allows users not familiar with accounting code to readily obtain the needed financial data.



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## 1.4. Implementation

Since August 1995 the DAFIS MIR / DW development team has been setting up DOT Administrations as beta pilot sites with access to the DAFIS MIR / DW database. As each new Administration is implemented, the development team works closely with them to provide training and to obtain feedback regarding their impressions of the MIR/DW. There are currently approximately 256 DAFIS users with access to the data warehouse. The development team will continue to implement Administrations until all have been set up as beta pilot sites.

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## 1.5. Data Currently Available

DAFIS MIR / DW will provide more data than is currently available through DAFIS inquiries and reports. Processed transactions are purged from the BCF when the batch containing those transactions is completely processed and error free. The Open Document File (ODF) is then the only online source of transaction level information and that data is only available for open documents and those transactions that update the ODF. The DAFIS MIR / DW will contain detailed

transaction level information for all processed transactions (regardless of **batch** status) even though the document may never have updated the ODF or no longer resides on the BCF or ODF. This type of information could, for example, be used to provide support for General Ledger balances or other summary type financial information.

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## 1.6. Future Development

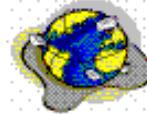
Current literature on building data warehouses suggests that requirements cannot be completely known until the warehouse is populated with data and being used. Therefore, the development of a data warehouse must be a iterative and ongoing process utilizing feedback from the users. With the development team providing the initial training and working closely with each administration during its implementation phase, user feedback will provide information critical to successful development of the DAFIS data warehouse.

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## 1.7. Additional DAFIS Information

Additional information on DAFIS transactions, accounting classification structure, special processes, term definitions, etc. may be found in the:

- DAFIS User Guide and Reports Guide manuals

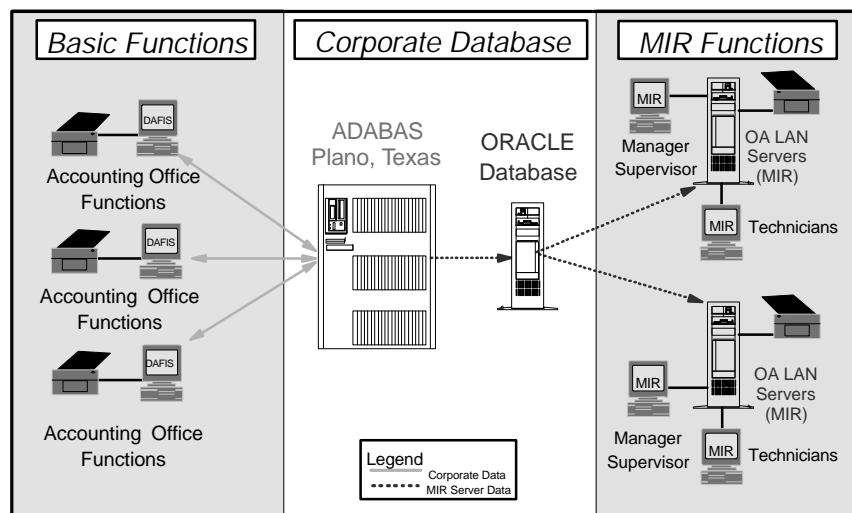


AMZ Web Site, URL Address:

- Documentation at  
<http://www.amz.jccbi.gov>

# Chapter 2 - General System Concepts

## 2.1. DAFIS MIR / DW Architecture



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## **2.2. Hardware, Software, and Network Requirements**

### **a. Hardware - Personal Computer**

- CPU (Central Processing Unit) - 80486 or better
- Memory - 8Mb or more
- Disk Space - 100 Mb or more

### **b. Software - Mandatory**

- Microsoft® Windows ( version 3.1 or better)
- Oracle SQL\*Net (TCP/IP) 2.0 or above
- Microsoft® DOS 5.0 or better
- TCP/IP
- Microsoft® Win 32s
- At least one software program to access Oracle data

### **c. Software Optional**

- Microsoft® Word (version 6.0)
- Microsoft® Excel (version 5.0) with Microsoft® Query option
- Borland® ReportSmith™ (version 2.0 that supports TCP/IP)
- Oracle SQL\*Plus
- Microsoft®Access (Version 2.0)
- Any other ODBC compliant application

### **d. Network**

- LAN connection to the Inter-Departmental Network (IDN)
- Modem with 9.6 Kbs or better
- Access to modem pool or communications server

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## **2.3. Software**

Based on user surveys, the preferred tool for the DAFIS MIR / DW is a spreadsheet with Microsoft® Excel being the most used of the spreadsheet tools. Since Microsoft® Excel contains an easy-to-use database query capability known as Microsoft® Query which can be used with the DAFIS MIR / DW database, it is the recommended tool for the initial phase. With Microsoft® Excel, users will be able to tailor reports and inquiries to meet their needs and also use the extensive graphic capabilities of Microsoft® Excel to further enhance their displays of financial information. The user may easily export data to other personal computer (PC) tools such as Microsoft® Word .

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## **2.4. Database**

Relational databases are created with the implementation of a model of multiple joined tables and allow for the logical, non-redundant arrangement of data. Data is modularized by function and purpose for greater efficiency and data security.

A database is composed of the following:

### **a. Tables**

- A logical grouping of data elements by function, purpose, and retention period.
- Can be thought of in much the same way as a data file.
- Contain rows (records).
- Contain columns (fields).

### **b. Relationships**

- Can be one to one or one to many.
- Must also be either mandatory or optional.

### **c. Translation/Lookup Tables**

- A table whose sole purpose is to further identify the information represented by a code or series of codes in another table; for example, cost center, appropriation, program element, object class.
- (Largely) static information.

### **d. Views**

- A predefined table or a joining of tables that appear to look like a table on the database.
- A “logical” table constructed from portions of several tables.
- Do not exist in the physical sense.
- Can simplify access to subsets of data that must often be accessed together, but are physically stored in separate tables.

### **e. Stored Procedures**

- Predefined processes that exist on the file server to accomplish a specific task or tasks.
- Can be invoked by the user on demand.
- Distribute processing between the workstation and the file server.

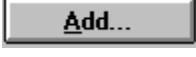
## f. Data Types

- **Number.** The column can contain only numbers. The format is *length, precision*.
- **Varchar2.** The column can contain alphanumeric characters up to the specified *size*.
- **Date.** The column contains date and corresponding time. For “beginning date” fields, the time is set to midnight (00:00:00). For “ending date” fields, the time is set to one second before midnight (23:59:59).

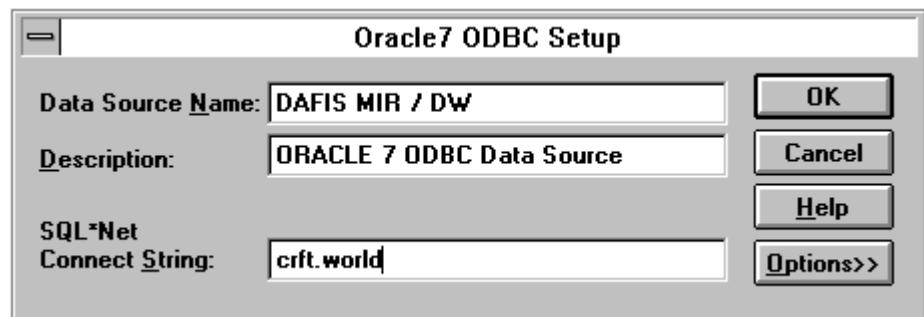
# Chapter 3 - Logon Procedures

## 3.1. Initial Setup

The following steps must be completed before accessing DAFIS MIR / DW. These steps need to be performed only **one** time.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Within the <i>Program Manager</i> window double-click within the <i>Main</i> window or on the <i>Main</i> icon.  Main	The <i>Main</i> window will appear.
Step 2	Within the <i>Main</i> window, double-click the <i>Control Panel</i> icon.  Control Panel	The <i>Control Panel</i> window will appear.
Step 3	Within the <i>Control Panel</i> Window double-click on the <i>ODBC</i> icon.  ODBC	The <i>Data Sources</i> submenu will appear.
Step 4	From the <i>Data Sources</i> drop down menu select <b>DAFIS MIR / DW (Oracle 7)</b> . Click on 	<i>Add Data Sources</i> submenu will appear containing installed ODBC drivers.
Step 5	Select <b>Oracle 7</b> from the <i>Installed ODBC Drivers</i> menu. Click 	The <i>Oracle 7 ODBC Setup</i> dialog box appears.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 6	<p>Type <b>DAFIS MIR / DW</b> in the <i>Data Source Name</i> field.</p> <p>Type <b>Oracle 7 ODBC Data Source</b> or another concise description in the <i>Description</i> field.</p> <p>Type the name of the server you wish to access in the <i>SQL*Net Connect String</i> field, i.e. <b>crft.world</b>.</p> <p style="text-align: center;"><b>OK</b> Click</p>	ODBC Initial setup is now complete.



# Chapter 4 - Software

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## 4.1. Software Packages



This section will discuss the software package Microsoft® Query used with the DAFIS MIR / DW program

The following software packages and programming language that may be used with the DAFIS MIR / DW program will be added at a later date.

1. Borland® ReportSmith™
2. Oracle®SQL\*Plus®

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NOTE: Screen shots, menus, etc. may appear slightly different than the ones you see on your PC. Software versions may vary.

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## 4.2. Microsoft® Query

Microsoft® Query is a graphical tool that allows the user to retrieve and organize data from a variety of sources, and then permits one to view, edit, and organize data. The user can insert the data into a Microsoft® Windows application file such as Microsoft® Excel. Using this tool the user is empowered to create any report or query necessary to meet information needs.

This segment explains how to query the DAFIS MIR / DW database utilizing Microsoft® Query, and produce reports in Microsoft® Excel.

### a. References

For further information about any of the topics presented in this lesson, as well as additional Microsoft® Query features, consult the following:

- Microsoft® Query User Guide
- Microsoft® Excel User Guide

- Microsoft® Online Documentation
- MIR Team Lead, Sharon Ashpaugh, phone: 405-954-6117, e-mail: Sharon\_Ashpaugh@mmacmail.jccbi.gov

## b. Microsoft® Query Basics

### (1) Accessing DAFIS MIR / DW Tables

Microsoft® Excel is used to utilize Microsoft® Query. The following examples use step-by-step instructions.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Double-click on the Microsoft® Excel icon.   Microsoft Excel	The Microsoft® Excel application opens.
Step 2	Click on <b>Data</b> in the <i>Menu Bar</i> and click on the <b>Get External Data</b> command. <i>Note: If Get External Data is not found in the Data menu, it must be installed using steps outlined in the next set of steps numbered 1 - 5 below.</i>	The <i>Select Data Source</i> dialog box appears.
Step 3	Select <b>DAFIS MIR / DW</b> . (Unless you have titled your data source something else in the <i>ODBC</i> setup).   Click	The <i>Logon to Oracle</i> dialog box appears.
Step 4	Type your User ID (see note below) and Password.   Click	Only password will be required after initial signon.  The <i>Add Tables</i> dialog box is displayed.
Step 5	Using the pull-down menu next to <i>Owner</i> , select <b>CRAFTS</b> . Click <b>Options...</b> . Ensure that <i>Views and Synonyms</i> are both selected in the <i>Show Box</i> .   Click	The <i>Add Tables</i> dialog box is displayed again.

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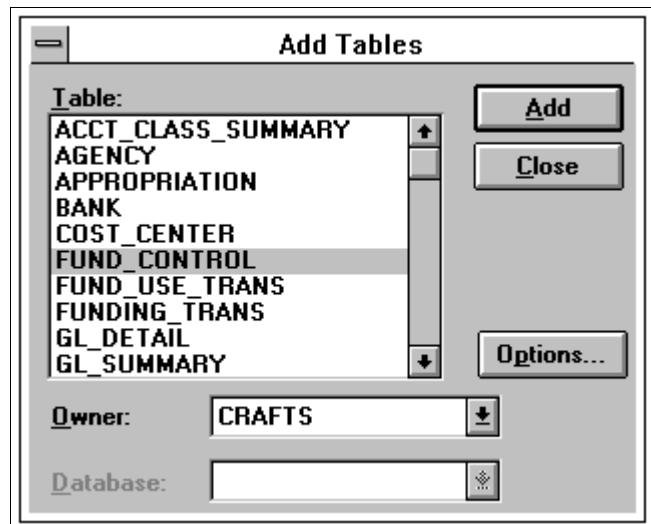
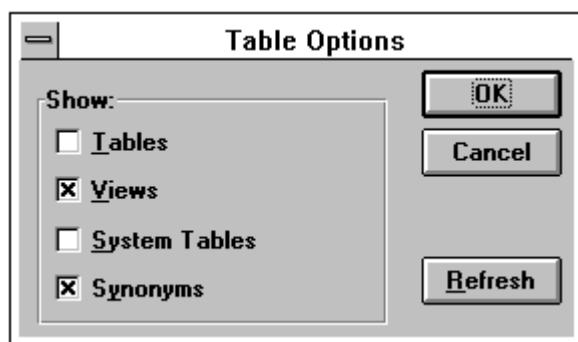
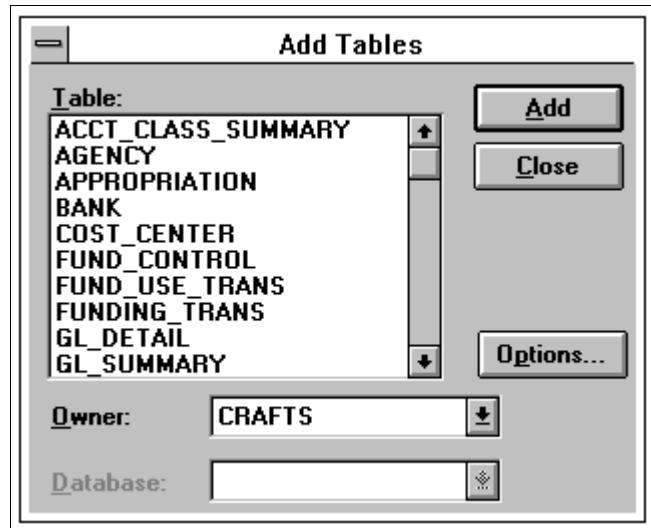
**NOTE:** Due to a reserved character in Oracle, all DAFIS User IDs containing the character ‘@’ have been modified. The ‘@’ in the ID has been changed to numerical ‘0’. Please enter your ID using the new character numerical ‘0’.

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## (a) Inserting 'Get External Data' in the Data Menu

These next steps are necessary only if the *Get External Data* command is not found in the *Data* menu. (Reference Step 2 above).

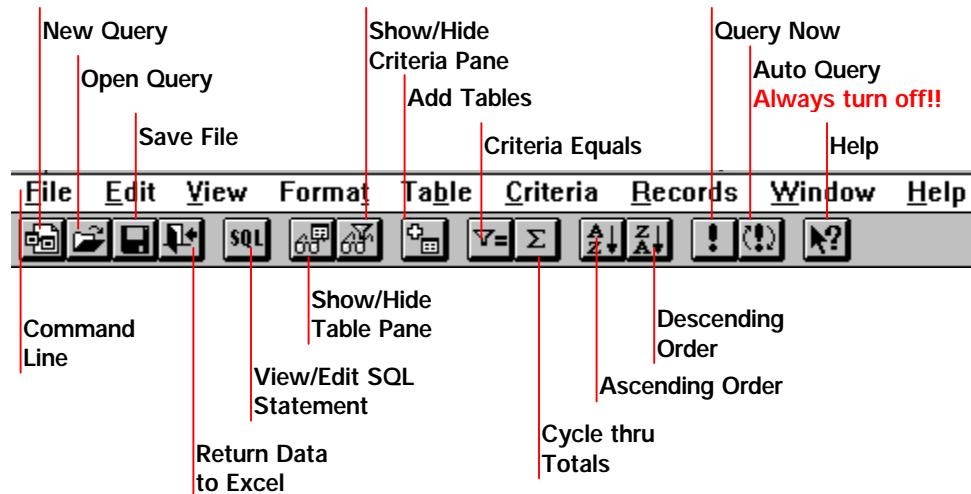
STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	From the <i>Tools</i> menu select <b>Add-Ins</b> .	The <i>Add-Ins</i> dialog box appears.
Step 2	In the <i>Add-Ins</i> dialog box select <b>XLQuery</b> (your PC may show <b>MS Query Add-In</b> ) from the <i>Add-Ins Available</i> menu.   Click	
Step 3	If the <i>Add-Ins</i> dialog box <b>does not</b> show the <b>XLQuery (or MS Query Add-In)</b> option,   click	The <i>Browse</i> dialog box appears.
Step 4	From the <i>Directories</i> menu in the <i>Browse</i> dialog box select the subdirectory <b>library</b> and then move to the <b>MSQuery</b> subdirectory and select <b>XLQUERY.XLA</b> .   Click	The screen will return to the <i>Add-Ins</i> dialog box.
Step 5	In the <i>Add-Ins</i> dialog box ensure that <b>XLQuery (or MS Query Add-In)</b> is highlighted and has an “X” in the box to the left   Click	The screen will return to the worksheet and <i>Get External Data</i> will be displayed at the bottom of the <i>Data</i> menu.

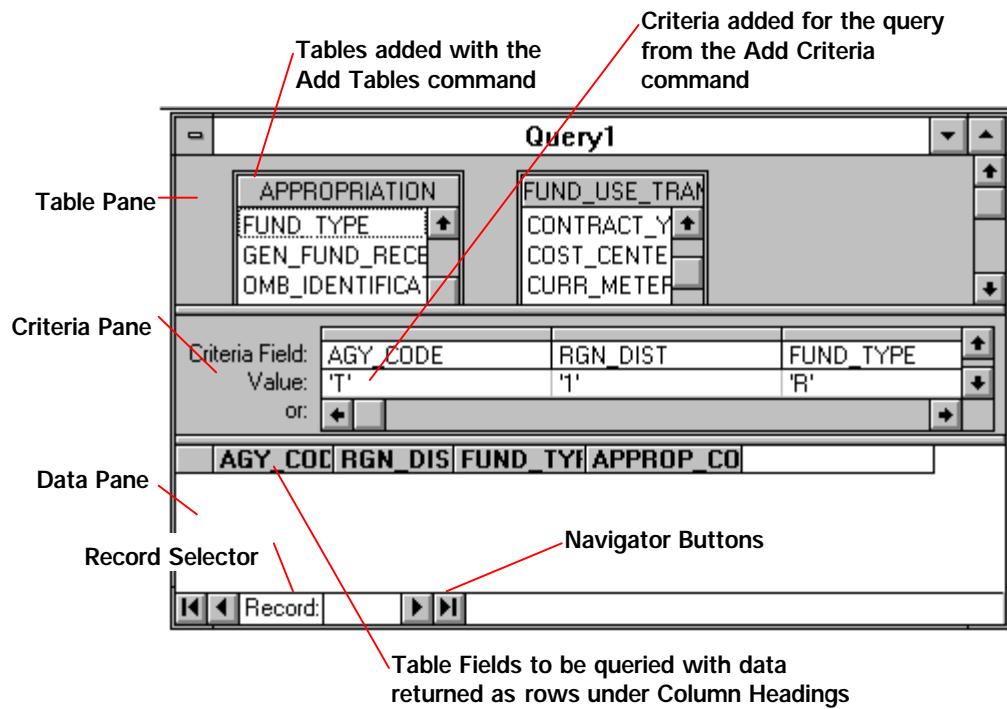


STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 6	Select the desired table. Click 	Each table is displayed in the <i>Table Pane</i> of the <i>Query window</i> when added. Repeat if you wish to select/add other tables.
Step 7	Click 	The <i>Add Tables</i> box disappears and the tables you have selected/added will appear in the <i>Table Pane</i> of the <i>Query window</i> .
Step 8 <b>Attention!!</b>	<b>TURN OFF AUTO QUERY!!!</b> <b>Click the Auto Query button!!!!</b>  This button should appear dark gray (off), not light gray (on).	 This Auto Query button will default to light gray (on) each time Microsoft® Query is started. You must turn it off (dark gray) each time you start Microsoft® Query!
Step 10 (Optional)	You may wish to enlarge the table boxes that have appeared in the <i>Table Pane</i> of the <i>Query window</i> .	This will allow you to read the complete names of the fields.

## (2) Understanding the Query Window

After you add tables and close the *Add Tables* dialog box, you will see the *Query window*. You use this window to design, edit, and run your query.





### (3) Helpful Tips for Using Microsoft® Query

Some of the most important things to be remembered when working in Microsoft® Query:



This button always defaults to “on” (light gray). Each time you enter Microsoft® Query or begin a new query ensure that this button is turned “off” (dark gray).



Never minimize the Microsoft® Query window. Use the **Alt + Tab** keys to move to other applications that are open behind Microsoft® Query. Each time these keys are pressed the symbol and title of each of the other open applications will appear in a box on the screen. When the application to which you wish to go appears, release the buttons and that application will maximize.



#### **Microsoft Query**

Never exit Microsoft® Query without returning data to Microsoft® Excel. Press



to return data or choose *Return Data to Excel* from the *File* menu.



You cannot access other open applications while a query is executing.



Know what results you expect to be returned. This comes with a workable knowledge of the database.

#### **(4) Selecting Fields (Data to be Displayed as Columns)**

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Double click on fields desired or you may drag and drop  . By double clicking on * at the top of the list of fields, all table fields will be selected and displayed.	The selected fields will appear as column headings in the <i>Data Pane</i> and will be added to the right in the order selected.

#### **(5) Moving Columns**

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Select the column you want to move by clicking its column heading.	The column heading will be highlighted.
Step 2 (Optional)	To select a block of columns, select the first column in the block, then hold down the <b>SHIFT</b> key and click the column heading of the last column in the block.	All column headings in the block will be highlighted.
Step 3	Click the column heading again and drag the column to its new location.	If multiple columns have been selected, click any of their column headings and drag the entire group.

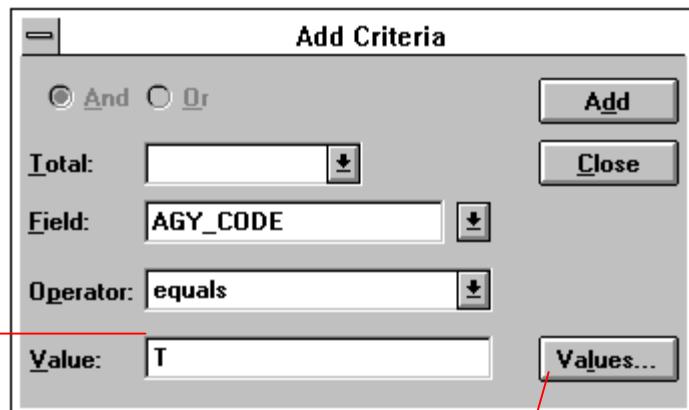
#### **(5) Specifying Criteria**

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NOTE: To specify criteria you must have added tables to the Table Pane.

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STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	From the <i>Criteria</i> menu, select <b>Add Criteria</b>	The <i>Add Criteria</i> dialog box is displayed as illustrated in the example below.



Type the value here

Pressing this button will start a search for values which may take a long time. ***Using this button is not recommended!***

Step 2	Using the <i>Field</i> pull-down menu, select a field to be used as the criteria.	
Step 3	Select the operator you wish to use from the <i>Operator</i> pull-down menu	
Step 4	Tab to the <i>Value</i> box. Type the value you wish to use as the criteria, i.e., if your criteria field is agency code, you would select the number or letter of the agency code.	Use upper case and make sure you have access to that field.
Step 5	Click	The <i>Criteria Pane</i> appears in the center of the <i>Query window</i> and the <i>Add Criteria</i> box remains.
Step 6	If you wish to add more criteria, click next to <b>And</b> in the <i>Add Criteria</i> dialog box and repeat Steps 2 through 5.	
Step 7	Click	<b>NOTE:</b> <i>The more restrictive your criteria, the faster query will execute and return a more manageable data set!! Also, for efficiency, consider indexes and arrange your criteria in the order of an index.</i>

## (6) Sorting Data

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Click on the heading of the column by which data is to be sorted.	
Step 2	Click  to sort in ascending order; click  to sort in descending order.	
Step 3	Click 	<i>Note: If this step (Sorting Data) is not taken before the initial query, the data will not be sorted until data is re-queried.</i>

-OR-

To sort multiple columns:

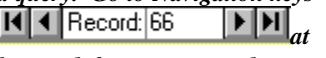
STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	From the <i>Records</i> menu select <b>Sort</b>	The <i>Sort</i> dialog box will appear as shown below.
Step 2	Select the name of the column you wish to sort from the <i>Column</i> pull-down menu.	
Step 3	Select either <b>Ascending</b> order or <b>Descending</b> order by clicking on the radio button to the left of each.	Each column name selected will appear in the <i>Sorts in Query</i> box.
Step 4	Click 	
Step 5	Click 	

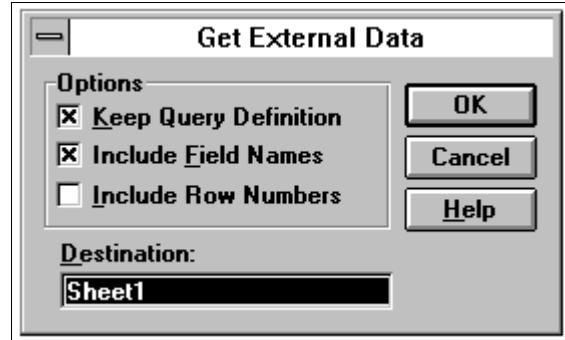
## (7) Executing Query

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NOTE: The more restrictive your criteria, the faster query will execute and return a more manageable data set!! The largest table in the Oracle database is approaching 100 million records, so you can see the necessity of specific inquiries. You can speed up your inquiries by using the indexes in Appendix E. Most inquiries utilizing indexes run in much less than one minute if structured correctly. Sometimes with thousands of records to search it can take 5-10 minutes.

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STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Click Query Now 	After query is complete data appears in the <i>Data Pane</i> of the <i>Query window</i> . <i>Note: Another application cannot be accessed while query is running (as long as  appears on screen)</i> . See list of reasons below that may slow down a query. Go to Navigation keys  at bottom left on screen and move to bottom of data. Note how many records have been returned.
Step 2 (Optional)	From the <i>File</i> menu select <i>Save</i> or click  Type a name for the query. Click 	This step is not necessary unless you wish to save the query to use later.
Step 3	From the <i>File</i> menu, select <b>Return Data to Excel</b> or click 	<b>Get External Data</b> dialog box is displayed as shown below.
Step 4	Ensure that <b>Keep Query Definition</b> and <b>Include Field Names</b> are selected. Click 	The data is placed in a Microsoft® Excel spreadsheet. <i>Note: Maximum number of lines that may be returned to Microsoft® Excel is 16,384.</i>



Any of the following reasons could be the explanation for a query that is taking a long time to complete.

- A large amount of data is being returned.
- The query may not be efficient or has gone into a loop.
- Too much traffic on network.
- Your PC resources are overloaded
- Communications may have been interrupted (if only for an instant) somewhere between your PC (client) and the DAFIS MIR / DW client server in Oklahoma City.

To recover from these circumstances it may be necessary to:

- Review each step used to prepare the query to ensure each is valid. Also, criteria established may need to be made more specific and/or rearranged in the sequence of an index.
- Reboot your PC. If you kill the query with a soft or hard boot the present query and all current work (not previously saved) on every application running behind Microsoft® Query will not be saved. Also, lost clusters may be created requiring maintenance on your PC. If your session is killed (terminated) you can usually close the query (small '-') and return to Microsoft® Excel , but you must also close Microsoft® Excel to break the Dynamic Data Exchange (DDE) link and then relaunch Microsoft® Excel and Microsoft® Query . Please contact a MIR Team member and request your session be terminated. (Please refer to Section 5.5. Team Member Names and Numbers.:)

## **(8) Joining DAFIS MIR / DW Tables**

In the event it becomes necessary to include fields in a query that are not represented on the same table or in a stored view, two tables must be joined (related) so that fields in both tables may be used in a query in a meaningful way.

Joins on tables that are frequently used have been developed and stored in the Data Warehouse as complex ‘Views’ (See Appendix A). Whenever possible, complex views should be used rather than creating new joins. Complex views should not be used in joins.

To be able to perform ‘Joins’, common fields in both views/tables are connected to link the views/tables as one. Characteristics of the joining or connecting fields are:

- Connecting field(s) must exist on both views/tables.
- Connecting field(s) normally have the same or similar names.
- Connecting field(s) normally have the same datatype (i.e., numeric or alpha/numeric).
- Connecting field(s) will uniquely define one record on one of the joining views/tables. This is essential to insure complete and relevant data is obtained from the join. Please refer to Appendix D, Unique Fields for Individual Views/Tables.

Having the same field name does not necessarily indicate the fields contain “like” information. For example, the FUND\_USE\_TRANS table and the APPROPRIATION table both contain the field PROCESS\_DATE. However, the

PROCESS\_DATE field in the FUND\_USE\_TRANS table contains the date the transaction was processed and the PROCESS\_DATE field in the APPROPRIATION table is the date Table R07 was last updated. The fields do not contain data with the same meaning. Field names from the source tables need not have the same field name, but MUST be the same kind of data to be of any value. For example, don't join AGY\_CODE directly to APPROP\_CODE, that doesn't make sense; but you might join AGY\_CODE with AGY\_CODE.

Tables related in the *Table Pane* of a *Query window* are called *Joins*.

<b>Inner Joins</b>	These contain records from both tables only when there are matching values in both joined fields. Both one-to-one and one-to-many relationships are inner joins.
<b>Outer Joins or Left/Right Joins</b>	These use all fields from one table but only matching fields from the other table. This can only be used in a one-to-many relationship.

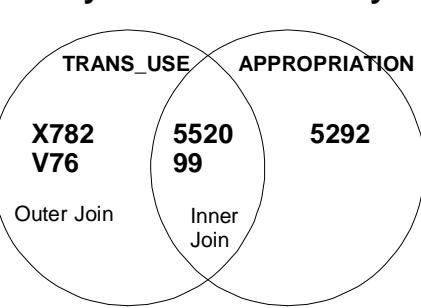
## Inner and Outer Joins

### Tables

TRANS_USE	APPROPRIATION
5520	99
X782	5520
V76	5292
99	

Inner Join Results: 5520  
99

Outer Join Results: 5520  
99  
X782  
V76



Two tables or queries that have established relationships and are chosen as data sources for the query will be joined using the established relationship.

There are two ways to join tables together in Microsoft® Query:

1. Drag and Drop
2. Command Line

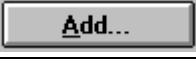
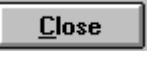
### (a) Method 1 - Drag and Drop

This method may be used for inner joins only. Returns only rows of data that appear on **both** or **all** tables joined.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Scroll down in the first table until the first field to be joined is visible.	
Step 2	Scroll down in the second table until the second field to be joined is visible.	
Step 3	Click and hold the primary mouse button  over the selected field in the first table.	A rectangular box appears.
Step 4	Drag the box over to the selected field in the second table. Release the mouse button.	A line with a dot at each end connecting the two fields appears between the two tables.
Step 5 (Optional)	If you wish to change the inner join just created to an outer join: Double click on the connecting line and the <i>Joins</i> dialog box will appear and you may create an outer join.	See Step 5 of Method 2 - Command Line below.

### (b) Method 2 - Command Line

The second method may be used for either inner or outer joins. In other words, if all rows from one table are to be seen regardless of whether they appear on both tables, use the following method:

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	From the <i>Table</i> menu, select <i>Joins</i> .	The <i>Joins</i> dialog box appears
Step 2	From the <i>left</i> pull-down menu, select the table name and joining field.	
Step 3	From the <i>right</i> pull-down menu, select the other table name and joining field.	
Step 4	From the <i>Operator</i> pull-down menu, select <b>=</b> .	
Step 5	For an inner join, click the <i>Number 1 Radio Button</i> . For an outer join, click either <i>Number 2 or 3 Radio Button</i> . (Select the button that selects all fields from one table and only the matching fields from the other table. Click 	Outer join or inner join will be included in the text in the <i>Joins in Query</i> box in the <i>Joins</i> dialog box.
Step 6	Click 	A line with a dot on one end and an arrow on the other connecting the two fields appears between the two tables.

# **Chapter 5 - Beta Test Instructions**

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## **5.1. Definition**

A beta test is a thorough analysis of a software package in a production environment using actual transactions. It is intended to determine whether an implemented system fulfills the functional purpose determined by its users. The DAFIS MIR / DW beta test is an evaluation of the foundation of the department's new data warehouse. The purpose of the test is two-fold; (1) to evaluate the initial phase of development and (2) to look to the system's potential to satisfy financial information needs in subsequent development phases.

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## **5.2. Test Plan**

All administrations will have an opportunity to participate in the beta test. The development team will work closely with each administration for approximately one month to assist with:

- establishing connectivity
- learning the system
- beta testing

Suggestions for improvements to the system will be made by the users via e-Mail/ccmail, phone or FAX. The development team will utilize these suggestions to refine the system to meet user expectations.

---

## **5.3. User Responsibilities**

During the beta test, users will have the following responsibilities:

- Become familiar with:
  - data in the warehouse
  - accessing the data warehouse
  - executing queries in the selected software tools
- Verify the completeness and accuracy of their administration's data
- Determine if the system is useful to their administration. If not, submit recommendations to make it useful.
- Determine how the system could be improved to benefit their administration.

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## **5.4. DAFIS MIR / DW Development Team Responsibilities**

The DAFIS MIR / DW Development Team will assist users by:

- Providing initial training sessions for both system administrators and users
- Providing onsite support during the first week of beta testing
- Responding to administration suggestions for improvements
- Terminating user sessions

---

## **5.5. Team Member Names and Numbers:**

Sharon Ashpaugh, Lead	405-954-6117
Gary Walvoord	405-954-7660
Steve Grisham	405-954-8221
Martin Douglas	405-954-6125
Ricky Williams	405-954-6123

If one of the above is unavailable call:

Tina Carlson	405-954-7495
Keri Duenow	405-954-9022
Marcus Hamman	405-954-8222
Peggy Howard	405-954-4958
Angie Alltizer	405-954-6972
David Laughead	405-954-4957
Keith Nelson	405-954-6939
FAX Number	405-954-4806

# Appendix A

## Views

VIEW NAMES	TABLE NAMES	Similar to DAFIS
ACCT_CLASS_SUMMARY	T_ACCT_CLASS_SUMMARY, SECU_ACC	ACF, FSF
ACS_DOCSUM	T_ACCT_CLASS_SUMMARY, T_DOCUMENT_SUMMARY, SECU_ACC	ACF, FSF, ODF
ACS_FUT	T_ACCT_CLASS_SUMMARY, T_FUND_USE, SECU_ACC	ODF
AGENCY	T_AGENCY_TABLE	T01
ALL_TRANS	T_FUNDING_TRANS, T_FUND_USE_TRANS, T_OTHER_TRANS, SECU_ACC	FMT 01-14, BCF, RIS NO: I-A, I-H
APPROPRIATION	T_APPROPRIATION, SECU_ACC	R07
BANK	T_BANK	FOD
COST_CENTER	T_COST_CTR_TABLE, SECU_ACC	T06
DOCUMENT_SUMMARY	T_DOCUMENT_SUMMARY, SECU_ACC	ODF, IDF
FUND_CONTROL	T_FUND_CONTROL, SECU_ACC	RT1
FUND_PAY	T_FUND_USE_TRANS, T_VENDOR, T_BANK, T_TERMS, SECU_ACC	RIS NO: I-A, I-C
FUND_USE_GL	T_FUND_USE_TRANS, T_GL_DETAIL, T_GL_SUMMARY, SECU_ACC	FMT 03-14, BCF, RIS NO: I-A, I-H
FUND_USE_TRANS	T_FUND_USE_TRANS, SECU_ACC	FMT 03-14, BCF, RIS NO: I-A, I-H
FUNDING_GL	T_FUND_USE_TRANS, T_GL_DETAIL, T_GL_SUMMARY, SECU_ACC	FMT 03-14, BCF, RIS NO: I-A, I-H
FUNDING_TRANS	T_FUNDING_TRANS, SECU_ACC	FMT 03-14, BCF, RIS NO: I-A, I-H
GL_DETAIL	T_GL_DETAIL	GL-FILE Enhanced

<b>VIEW NAMES</b>	<b>TABLE NAMES</b>	<b>Similar to in DAFIS</b>
GL_SUMMARY	T_GL_SUMMARY, SECU_ACC	GL-FILE
GL_TRANS	T_GL_DETAIL, T_GL_SUMMARY, T_FUND_USE_TRANS, T_FUNDING_TRANS, T_OTHER_TRANS, SECU_ACC	ACF, FSF, ODF, IDF, BCF; RIS NO: I-A, I-H, I-O, I-C; GL-FILE
INVEST_TRK_MODULE	T_INVEST_TRK_MODULE, SECU_ACC	ITM
OBJECT_CLASS	T_OBJECT_CLASS	R08, T24
OBJECT_CLASS_MAJOR	T_OBJECT_CLASS, SECU_ACC	R08, T24
PROGRAM_ELEMENT	T_PROGRAM_ELEMENT, SECU_ACC	R06
STANDARD_GL	T_STANDARD_GL	T21
TERMS	T_TERMS	T42
VENDOR	T_VENDOR, SECU_ACC	T16, RIS NO: I-A, I-H.1, I-C
VEND_TRANS	T_FUND_USE_TRANS, T_VENDOR, SECU_ACC	ODF, IDF, BCF; RIS NO: I-A, I-H.1, I-C

# Appendix B

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## Tables

### TABLE NAMES

MIR\_USER  
SECU\_ACC  
STATS  
T\_ACCT\_CLASS\_SUMMARY  
T\_AGENCY\_TABLE  
T\_APPROPRIATION  
T\_BANK  
T\_COST\_CTR\_TABLE  
T\_DOCUMENT\_SUMMARY  
T\_FUNDING\_TRANS  
T\_FUND\_CNTL  
T\_FUND\_USE\_TRANS  
T\_GL\_DETAIL  
T\_GL\_SUMMARY  
T\_INVEST\_TRK\_MODULE  
T\_MASS\_CHANGE  
T\_OBJECT\_CLASS  
T\_OTHER\_TRANS  
T\_PROGRAM\_ELEMENT  
T\_STANDARD\_GL  
T\_TERMS  
T\_VENDOR

# Appendix C

## Fields

<b><u>FIELD/COLUMN NAME(S)</u></b>	<b><u>TYPE &amp; LENGTH</u></b>	<b><u>TABLE(s) OR VIEW(s)</u></b>
ACCESS_TYPE	VARCHAR2 1	MIR_USER
ACCOUNT HOLDER	VARCHAR2 22	VENDOR FUND_PAY VEND_TRANS
ACCOUNT_NUMBER	VARCHAR2 17	VENDOR FUND_PAY VEND_TRANS
ACCOUNT_TYPE	VARCHAR2 1	VENDOR FUND_PAY VEND_TRANS
ACCTS_RCV	NUMBER 15. 2	ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
ACH_EFT_FLAG	VARCHAR2 1	VENDOR FUND_PAY VEND_TRANS

<b>ACS_CNTL_NUM</b>	<b>NUMBER</b>	<b>10</b>	(K1) <b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_USE_TRANS</b> <b>FUND_PAY</b> <b>GL_SUMMARY</b> <b>OTHER_TRANS</b> <b>VEND_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>ACS_DEL_CNT</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>ACS_UPD_CNT</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>ADDRESS1</b>	<b>VARCHAR2</b>	<b>35</b>	<b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>ADDRESS2</b>	<b>VARCHAR2</b>	<b>35</b>	<b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>ADDRESS3</b>	<b>VARCHAR2</b>	<b>30</b>	<b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>ADDRESS4</b>	<b>VARCHAR2</b>	<b>30</b>	<b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>ADDRESS_LINE1</b>	<b>VARCHAR2</b>	<b>35</b>	<b>VENDOR</b>
<b>ADDRESS_LINE2</b>	<b>VARCHAR2</b>	<b>35</b>	<b>VENDOR</b>
<b>ADDRESS_LINE3</b>	<b>VARCHAR2</b>	<b>30</b>	<b>VENDOR</b>
<b>ADDRESS_LINE4</b>	<b>VARCHAR2</b>	<b>30</b>	<b>VENDOR</b>
<b>ADDRESS_NAME</b>	<b>VARCHAR2</b>	<b>35</b>	<b>VENDOR</b>
<b>ADV_PAID</b>	<b>NUMBER</b>	<b>15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>GL_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>

<b>ADV_RCV</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>GL_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>AE_UNPAID</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>GL_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>AGENCY_NAME</b>	<b>VARCHAR2</b>	<b>47</b>	<b>AGENCY_TABLE</b>
<b>AGY_CODE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>SECU_ACC</b> <b>ACCT_CLASS_SUMMARY</b> <b>(K1) AGENCY_TABLE</b> <b>APPROPRIATION</b> <b>COST_CTR_TABLE</b> <b>DOCUMENT_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_CNTL</b> <b>FUND_PAY</b> <b>FUND_USE_TRANS</b> <b>INVEST_TRK_MODULE</b> <b>MASS_CHANGE</b> <b>OBJECT_CLASS</b> <b>OTHER_TRANS</b> <b>PROGRAM_ELEMENT</b> <b>STANDARD_GL</b> <b>VEND_TRANS</b> <b>VENDOR</b> <b>GL_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>Stats</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>ALLOTTEE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>FUNDING_TRANS</b> <b>GL_TRANS</b> <b>ALL_TRANS</b>

<b>ALLOT_FUND_CNTL</b>	<b>VARCHAR2 3</b>	<b>ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_PAY FUND_USE_TRANS GL_SUMMARY INVEST_TRK_MODULE OTHER_TRANS VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>ALLOT_FUND_CNTL</b>	<b>VARCHAR2 2</b>	<b>FUND_CNTL</b>
<b>ALLOT_FUND_CNTL_IND</b>	<b>VARCHAR2 3</b>	<b>MASS_CHANGE</b>
<b>ALLOT_LEVEL_IND</b>	<b>VARCHAR2 1</b>	<b>FUND_CNTL</b>
<b>ALLOT_QTR_1</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUNDING_TRANS</b>
<b>ALLOT_QTR_2</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUNDING_TRANS</b>
<b>ALLOT_QTR_3</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUNDING_TRANS</b>
<b>ALLOT_QTR_4</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUNDING_TRANS</b>
<b>AMOUNT</b>	<b>NUMBER 15. 2</b>	<b>FUNDING_TRANS FUND_USE_TRANS FUND_PAY OTHER_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS VEND_TRANS</b>
<b>APPROP_CODE</b>	<b>VARCHAR2 4</b>	<b>ACCT_CLASS_SUMMARY APPROPRIATION FUNDING_TRANS FUND_CNTL FUND_USE_TRANS GL_SUMMARY INVEST_TRK_MODULE MASS_CHANGE OTHER_TRANS PROGRAM_ELEMENT ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>

<b>APPROP_CODE_LIM</b>	<b>VARCHAR2 3</b>	<b>ACCT_CLASS_SUMMARY APPROPRIATION FUNDING_TRANS FUND_CNTL FUND_USE_TRANS GL_SUMMARY INVEST_TRK_MODULE MASS_CHANGE OTHER_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCUM ACS_FUT</b>
<b>APPROP_CODE_NAME</b>	<b>VARCHAR2 70</b>	<b>APPROPRIATION</b>
<b>APPROVED_BY</b>	<b>VARCHAR2 30</b>	<b>MIR_USER</b>
<b>AR_IOTV_IND</b>	<b>VARCHAR2 16</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>AUTH_DISB</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCUM ACS_FUT</b>
<b>AVAIL_TABLESPACE</b>	<b>NUMBER 9</b>	<b>Stats</b>
<b>BAL_UNCOLLECTED</b>	<b>NUMBER 15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>BANK</b>	<b>VARCHAR2 36</b>	<b>FUND_PAY</b>
<b>BANK_ADDRESS1</b>	<b>VARCHAR2 36</b>	<b>FUND_PAY</b>
<b>BANK_ADDRESS2</b>	<b>VARCHAR2 36</b>	<b>FUND_PAY</b>
<b>BANK_ADDRESS3</b>	<b>VARCHAR2 36</b>	<b>FUND_PAY</b>
<b>BANK_ADDRESS4</b>	<b>VARCHAR2 36</b>	<b>FUND_PAY</b>
<b>BANK_ADDRESS_LINE_1</b>	<b>VARCHAR2 36</b>	<b>BANK</b>
<b>BANK_ADDRESS_LINE_2</b>	<b>VARCHAR2 36</b>	<b>BANK</b>
<b>BANK_ADDRESS_LINE_3</b>	<b>VARCHAR2 36</b>	<b>BANK</b>

<b>BANK_ADDRESS_LINE_4</b>	<b>VARCHAR2</b>	<b>36</b>	<b>BANK</b>
<b>BANK_ADDRESS_NAME</b>	<b>VARCHAR2</b>	<b>36</b>	<b>BANK</b>
<b>BANK_ID</b>	<b>VARCHAR2</b>	<b>9</b>	<b>BANK FUND_PAY ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>BATCH_ID</b>	<b>VARCHAR2</b>	<b>9</b>	<b>FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>BEGINNING_CR_BAL</b>	<b>NUMBER</b>	<b>15.2</b>	<b>GL_SUMMARY</b>
<b>BEGINNING_DR_BAL</b>	<b>NUMBER</b>	<b>15.2</b>	<b>GL_SUMMARY</b>
<b>BILL_NUMBER</b>	<b>VARCHAR2</b>	<b>11</b>	<b>FUND_USE_TRANS</b>
<b>BILLED_REV</b>	<b>NUMBER</b>	<b>15.2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>BKUP_REEL_NUM</b>	<b>CHAR</b>	<b>6</b>	<b>Stats</b>
<b>BUDGETARY_FLAG</b>	<b>VARCHAR2</b>	<b>1</b>	<b>STANDARD_GL</b>
<b>CAPITALIZED_AMT</b>	<b>NUMBER</b>	<b>15.2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>CARRIED_FWD_PLANS</b>	<b>NUMBER</b>	<b>15.2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS ACS_DOCSUM</b>
<b>CATEGORY_CODE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>APPROPRIATION</b>
<b>CERTIFIER_ID</b>	<b>VARCHAR2</b>	<b>3</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>CHECK_NUM</b>	<b>NUMBER</b>	<b>10</b>	<b>FUND_USE_TRANS</b>
<b>CLOSE_FLAG</b>	<b>VARCHAR2</b>	<b>1</b>	<b>COST_CTR_TABLE</b>
<b>CLOSING_DATE</b>	<b>DATE</b>		<b>INVEST_TRK_MODULE</b>

<b>COLLECTIONS</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>COMMIT</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>COMPUTATION_DATE</b>	<b>DATE</b>		<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>CONTRACT_MO</b>	<b>VARCHAR2</b>	<b>2</b>	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>CONTRACT_NUMBER</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>
<b>CONTRACT_YEAR</b>	<b>VARCHAR2</b>	<b>2</b>	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>COST_CENTER</b>	<b>VARCHAR2</b>	<b>6</b>	<b>SECU_ACC</b> <b>ACCT_CLASS_SUMMARY</b> <b>COST_CTR_TABLE</b> <b>FUNDING_TRANS</b> <b>FUND_CNTL</b> <b>FUND_USE_TRANS</b> <b>GL_SUMMARY</b> <b>MASS_CHANGE</b> <b>OTHER_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>

<b>COST_CENTER_NAME</b>	VARCHAR2	21	<b>COST_CTR_TABLE</b>
<b>COST_EST_CYTD</b>	NUMBER	15. 2	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>COUNTER</b>	NUMBER	10	<b>Stats</b>
<b>CURQTR_SUBQTR_IND</b>	VARCHAR2	2	<b>STANDARD_GL</b>
<b>CURR_CREDIT_AMOUNT</b>	NUMBER	15. 2	<b>GL_SUMMARY</b>
<b>CURR_DEBIT_AMOUNT</b>	NUMBER	15. 2	<b>GL_SUMMARY</b>
<b>CURR_METER_READING</b>	NUMBER	9	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>CURR_NONCURR_IND</b>	VARCHAR2	2	<b>STANDARD_GL</b>
<b>CURR_YR</b>	NUMBER	4	<b>DOCUMENT_SUMMARY</b>
<b>DAY</b>	NUMBER	2	<b>FUND_PAY</b>
<b>DEBIT_CREDIT_FLAG</b>	VARCHAR2	1	<b>STANDARD_GL</b>
<b>DEFAULT_PMT_AR</b>	NUMBER	15. 2	<b>INVEST_TRK_MODULE</b>
<b>DEP_INT</b>	NUMBER	15. 2	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>DESCRIPTION</b>	VARCHAR2	100	<b>OTHER_TRANS</b>
<b>DISCOUNT_EARNED_AMT</b>	NUMBER	15 2	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>DISCOUNT_LOST_AMT</b>	NUMBER	15 2	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>

<b>DOC_CNTL_NUM</b>	<b>NUMBER</b>	<b>10</b>	<b>DOCUMENT_SUMMARY</b> FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>DOC_FIS_YEAR</b>	<b>VARCHAR2</b>	<b>2</b>	<b>DOCUMENT_SUMMARY</b> FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>DOC_ID</b>	<b>VARCHAR2</b>	<b>16</b>	<b>INVEST_TRK_MODULE</b>
<b>DOC_NUMBER</b>	<b>VARCHAR2</b>	<b>9</b>	<b>DOCUMENT_SUMMARY</b> FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>DOC_REF_METER_NUM</b>	<b>VARCHAR2</b>	<b>16</b>	<b>FUND_USE_TRANS</b> ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>DOC_SUFFIX</b>	<b>VARCHAR2</b>	<b>3</b>	<b>DOCUMENT_SUMMARY</b> FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT

<b>DOC_TYPE</b>	VARCHAR2 2	DOCUMENT_SUMMARY FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>DR_CR_FLAG</b>	VARCHAR2 1	GL_DETAIL GL_SUMMARY FUND_USE_GL FUNDING_GL GL_TRANS
<b>DUE_DATE</b>	DATE	INVEST_TRK_MODULE
<b>EFF_DATE</b>	DATE	FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>ENERGY_CONV_CODE_1</b>	VARCHAR2 1	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>ENERGY_CONV_CODE_2</b>	VARCHAR2 1	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>EXCL_DISCOUNT_AMT</b>	NUMBER 15 2	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>EXPND</b>	NUMBER 15.2	ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT

<b>EXP_APPROP</b>	<b>VARCHAR2</b>	<b>1</b>	<b>APPROPRIATION</b>
<b>EXTRACT_DATE</b>	<b>DATE</b>		<b>Stats</b>
<b>F_E_APPROV_EST</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>F_E_CURR_EST</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>F_E_MANHR_EST</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>F_E_ORG_EST</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>FACILITY_LOCATION</b>	<b>VARCHAR2</b>	<b>4</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>FACILITY_TYPE</b>	<b>VARCHAR2</b>	<b>6</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>

<b>FILLED_ORDER_UNCOLL</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>FINANCIAL_ACT_CODE</b>	<b>VARCHAR2</b>	<b>2</b>	<b>FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>FINAN_NONFINAN_IND</b>	<b>VARCHAR2</b>	<b>2</b>	<b>STANDARD_GL</b>
<b>FIRST_NAME</b>	<b>VARCHAR2</b>	<b>20</b>	<b>MIR_USER</b>
<b>FIS_YEAR</b>	<b>NUMBER</b>	<b>4</b>	<b>ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS</b>
<b>FIS_YEAR_MDNTH</b>	<b>NUMBER</b>	<b>4</b>	<b>GL_DETAIL GL_SUMMARY</b>
<b>FMT_01</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_02</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_03</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_06</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_07</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_11</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT-12</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT-14</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FMT_OTHER</b>	<b>VARCHAR2</b>	<b>10</b>	<b>Stats</b>
<b>FUND_AUTHORITY_QTR_1</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS</b>
<b>FUND_AUTHORITY_QTR_2</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS</b>
<b>FUND_AUTHORITY_QTR_3</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS</b>
<b>FUND_AUTHORITY_QTR_4</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS</b>
<b>FUND_CONTROL_NAME</b>	<b>VARCHAR2</b>	<b>25</b>	<b>FUND_CNTL</b>
<b>FUND_CONTROL_ORG</b>	<b>VARCHAR2</b>	<b>10</b>	<b>FUND_CNTL</b>

<b>FUND_CONTROL_PHONE</b>	<b>VARCHAR2</b>	<b>10</b>	<b>FUND_CNTL</b>
<b>FUND_CONTROL_PURPOSE</b>	<b>VARCHAR2</b>	<b>50</b>	<b>FUND_CNTL</b>
<b>FUND_TYPE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>APPROPRIATION ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>GEN_FUND_RECEIPT</b>	<b>NUMBER</b>	<b>5</b>	<b>APPROPRIATION</b>
<b>GL_ACCT</b>	<b>VARCHAR2</b>	<b>4</b>	<b>GL_DETAIL GL_SUMMARY STANDARD_GL FUND_USE_GL FUNDING_GL GL_TRANS</b>
<b>GL_ACCT_NAME</b>	<b>VARCHAR2</b>	<b>20</b>	<b>STANDARD_GL</b>
<b>GL_CNTL_NUM</b>	<b>NUMBER</b>	<b>10</b>	<b>GL_DETAIL (K1) GL_SUMMARY</b>
<b>GL_UPDATE_FLAG</b>	<b>VARCHAR2</b>	<b>1</b>	<b>INVEST_TRK_MODULE</b>
<b>GLS_DEL_CNT</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>GLS_UPD_CNT</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>GROSS_REVENUE</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>GSA_ADDRESS_CODE</b>	<b>VARCHAR2</b>	<b>21</b>	<b>COST_CTR_TABLE</b>
<b>GUARANTOR_NAME</b>	<b>VARCHAR2</b>	<b>7</b>	<b>INVEST_TRK_MODULE</b>
<b>HOLDBACK</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>HOME_NODE</b>	<b>VARCHAR2</b>	<b>25</b>	<b>MIR_USER</b>
<b>HOURS</b>	<b>NUMBER</b>	<b>11</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>

<b>IMPREST_FUND_CASHIER</b>	VARCHAR2 9	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>INDUSTRY_SEGMENT</b>	VARCHAR2 2	INVEST_TRK_MODULE
<b>INPUT_AGY_CODE</b>	VARCHAR2 1	FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>INPUT_FMT_CODE</b>	VARCHAR2 2	FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>INPUT_RGN_DIST</b>	VARCHAR2 1	FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>INTEREST_PEN_AMT</b>	NUMBER 15 2	INVEST_TRK_MODULE ALL_TRANS FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>INTEREST_RATE</b>	NUMBER 5	INVEST_TRK_MODULE
<b>INTERST_PEN_AMT</b>	NUMBER 15 2	FUND_USE_GL FUND_USE_TRANS
<b>INV_CUST_ACCT_NUM</b>	VARCHAR2 22	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS

<b>IOTV_NUMBER</b>	<b>VARCHAR2 9</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>IP_ADDRESS</b>	<b>VARCHAR2 15</b>	<b>MIR_USER</b>
<b>JOB_NUMBER</b>	<b>VARCHAR2 11</b>	<b>MASS_CHANGE</b>
<b>LAST_ACCESS_DATE</b>	<b>DATE</b>	<b>MIR_USER</b>
<b>LAST_NAME</b>	<b>VARCHAR2 30</b>	<b>MIR_USER</b>
<b>LOAD_START</b>	<b>DATE</b>	<b>Stats</b>
<b>LOAD_STOP</b>	<b>DATE</b>	<b>Stats</b>
<b>LOCK_BOX_NUMBER</b>	<b>VARCHAR2 17</b>	<b>VENDOR FUND_PAY VEND_TRANS</b>
<b>MAC_CODE</b>	<b>VARCHAR2 2</b>	<b>ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS GL_SUMMARY OTHER_TRANS STANDARD_GL ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>MANHR_EST_CYTD</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>MATURITY_DATE</b>	<b>DATE</b>	<b>INVEST_TRK_MODULE</b>
<b>METER_OTHER_ID</b>	<b>VARCHAR2 10</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>NET</b>	<b>NUMBER 2</b>	<b>FUND_PAY</b>

<b>NO_DISCOUNT_AMT</b>	<b>NUMBER</b>	<b>15 2</b>	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>OBJ_CLASS</b>	<b>VARCHAR2</b>	<b>4</b>	<b>GL_SUMMARY</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>OBJ_CLASS_ABBREV</b>	<b>VARCHAR2</b>	<b>10</b>	<b>OBJECT_CLASS</b>
<b>OBJ_CLASS_MAJOR</b>	<b>VARCHAR2</b>	<b>2</b>	<b>OBJECT_CLASS_MAJOR</b>
<b>OBJ_CLASS_MAJ_NAME</b>	<b>VARCHAR2</b>	<b>20</b>	<b>OBJECT_CLASS</b>
<b>OBJ_CLASS_NAME</b>	<b>VARCHAR2</b>	<b>21</b>	<b>OBJECT_CLASS</b> <b>OBJECT_CLASS_MAJOR</b>
<b>OBJECT_CLASS</b>	<b>VARCHAR2</b>	<b>4</b>	<b>ACCT_CLASS_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_CNTL</b> <b>FUND_USE_TRANS</b> <b>MASS_CHANGE</b> <b>OBJECT_CLASS</b> <b>OTHER_TRANS</b>
<b>OFFICE_CONTACT</b>	<b>VARCHAR2</b>	<b>35</b>	<b>AGENCY_TABLE</b>
<b>OLD_AGY_CODE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>MASS_CHANGE</b>
<b>OLD_ALLOT_FUND_CNTL_IND</b>	<b>VARCHAR2</b>	<b>3</b>	<b>MASS_CHANGE</b>
<b>OLD_APPROP_CODE</b>	<b>VARCHAR2</b>	<b>4</b>	<b>MASS_CHANGE</b>
<b>OLD_APPROP_CODE_LIM</b>	<b>VARCHAR2</b>	<b>3</b>	<b>MASS_CHANGE</b>
<b>OLD_COST_CENTER</b>	<b>VARCHAR2</b>	<b>6</b>	<b>MASS_CHANGE</b>
<b>OLD_JOB_NUMBER</b>	<b>VARCHAR2</b>	<b>11</b>	<b>MASS_CHANGE</b>
<b>OLD_OBJECT_CLASS</b>	<b>VARCHAR2</b>	<b>4</b>	<b>MASS_CHANGE</b>
<b>OLD_PROGRAM_ELEMENT</b>	<b>VARCHAR2</b>	<b>6</b>	<b>MASS_CHANGE</b>
<b>OLD_RGN_DIST</b>	<b>VARCHAR2</b>	<b>1</b>	<b>MASS_CHANGE</b>
<b>OLD_SYSTEM_CODE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>MASS_CHANGE</b>
<b>OMB_IDENTIFICATION</b>	<b>VARCHAR2</b>	<b>11</b>	<b>APPROPRIATION</b>
<b>OPERATOR_NAME</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>

<b>ORIGINAL_MORTGAGE</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>INVEST_TRK_MODULE</b>
<b>ORIG_CONSTR_LOANS</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>INVEST_TRK_MODULE</b>
<b>OWNER_NAME</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>
<b>PAYMENT_AMDUNT</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>INVEST_TRK_MODULE</b>
<b>PAYMENT_DATE</b>	<b>NUMBER</b>	<b>4</b>	<b>INVEST_TRK_MODULE</b>
<b>PAYMENT_FREQUENCY</b>	<b>VARCHAR2</b>	<b>1</b>	<b>INVEST_TRK_MODULE</b>
<b>PE_EXPANDED_NAME</b>	<b>VARCHAR2</b>	<b>70</b>	<b>PROGRAM_ELEMENT</b>
<b>PENALTY_INT</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>PERCENT</b>	<b>NUMBER</b>	<b>5</b>	<b>FUND_PAY</b>
<b>PHONE</b>	<b>VARCHAR2</b>	<b>10</b>	<b>MIR_USER</b>
<b>PHONE_NUMBER</b>	<b>VARCHAR2</b>	<b>12</b>	<b>AGENCY_TABLE</b>
<b>PLAN_LEVEL2_IND</b>	<b>VARCHAR2</b>	<b>1</b>	<b>ACCT_CLASS_SUMMARY</b> <b>GL_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_USE_TRANS</b> <b>OTHER_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>PLAN_LEVEL3_IND</b>	<b>VARCHAR2</b>	<b>1</b>	<b>ACCT_CLASS_SUMMARY</b> <b>GL_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_USE_TRANS</b> <b>OTHER_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>PLAN_QTR_1</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>PLAN_QTR_2</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>

<b>PLAN_QTR_3</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>PLAN_QTR_4</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>PLANNED_AMDUNT</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>ACCT_CLASS_SUMMARY</b>
<b>PRIOR_YEAR_PLANS</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>FUNDING_TRANS ALL_TRANS GL_TRANS ACS_DOCSUM</b>
<b>PRIOR_YR_ADJ_FLAG</b>	<b>VARCHAR2</b>	<b>1</b>	<b>APPROPRIATION</b>
<b>PROCESS_DATE</b>	<b>DATE</b>		<b>AGENCY_TABLE APPROPRIATION COST_CTR_TABLE FUNDING_TRANS FUND_CNTL FUND_USE_TRANS INVEST_TRK_MODULE MASS_CHANGE OBJECT_CLASS OTHER_TRANS PROGRAM_ELEMENT ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_FUT</b>
<b>PROGRAM_ELEMENT</b>	<b>VARCHAR2</b>	<b>6</b>	<b>ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_CNTL FUND_USE_TRANS GL_SUMMARY INVEST_TRK_MODULE MASS_CHANGE OTHER_TRANS PROGRAM_ELEMENT ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>PROG_ELEM_NAME</b>	<b>VARCHAR2</b>	<b>21</b>	<b>PROGRAM_ELEMENT</b>

<b>PROJECT_NUMBER</b>	VARCHAR2 9	ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS GL_SUMMARY OTHER_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>PUB_GOV_T_IND</b>	VARCHAR2 1	STANDARD_GL
<b>PUBLIC_GOV_T_IND</b>	VARCHAR2 1	ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS GL_SUMMARY ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>PY_RECOVERY</b>	NUMBER 15, 2	ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>PYR_EXCLUSION_FLAG</b>	VARCHAR2 1	PROGRAM_ELEMENT
<b>PYR_FLAG</b>	VARCHAR2 1	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>R224_IND</b>	VARCHAR2 1	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS
<b>RATE</b>	NUMBER 6	FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS

<b>RCD_TYPE</b>	VARCHAR2 1	<b>OTHER_TRANS</b> <b>Stats</b>
<b>REASON_CODE</b>	VARCHAR2 1	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>REIMB_AGREE_FLAG</b>	VARCHAR2 1	<b>APPROPRIATION</b> <b>FUND_USE_TRANS</b> <b>OTHER_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>REPORT_NUMBER</b>	VARCHAR2 35	<b>INVEST_TRK_MODULE</b>
<b>RGN_ADDRESS_LINE_1</b>	VARCHAR2 25	<b>AGENCY_TABLE</b>
<b>RGN_ADDRESS_LINE_2</b>	VARCHAR2 25	<b>AGENCY_TABLE</b>
<b>RGN_ADDRESS_LINE_3</b>	VARCHAR2 25	<b>AGENCY_TABLE</b>
<b>RGN_CONTACT</b>	VARCHAR2 3	<b>AGENCY_TABLE</b>
<b>RGN_DIST</b>	VARCHAR2 1	<b>SECU_ACC</b> <b>ACCT_CLASS_SUMMARY</b> <b>AGENCY_TABLE</b> <b>APPROPRIATION</b> <b>COST_CTR_TABLE</b> <b>DOCUMENT_SUMMARY</b> <b>FUNDING_TRANS</b> <b>FUND_CNTL</b> <b>FUND_USE_TRANS</b> <b>GL_SUMMARY</b> <b>INVEST_TRK_MODULE</b> <b>MASS_CHANGE</b> <b>OBJECT_CLASS</b> <b>OTHER_TRANS</b> <b>PROGRAM_ELEMENT</b> <b>STANDARD_GL</b> <b>VENDOR</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>FUNDING_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b> <b>Stats</b>
<b>RGN_NAME</b>	VARCHAR2 25	<b>AGENCY_TABLE</b>
<b>RISK_FACTOR</b>	VARCHAR2 2	<b>INVEST_TRK_MODULE</b>
<b>ROLES</b>	VARCHAR2 7	<b>MIR_USER</b>

<b>RTG_SYMBOL</b>	<b>VARCHAR2 7</b>	<b>MIR_USER</b>
<b>SCAC_CODE</b>	<b>VARCHAR2 4</b>	<b>FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>SCHEDULE_CERT_DEP</b>	<b>VARCHAR2 7</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>SEGMENT_DESCRIPTION</b>	<b>VARCHAR2 40</b>	<b>INVEST_TRK_MODULE</b>
<b>SELECT_CODE</b>	<b>VARCHAR2 2</b>	<b>INVEST_TRK_MODULE</b>
<b>SOURCE_CODE</b>	<b>VARCHAR2 1</b>	<b>ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS GL_SUMMARY OTHER_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT</b>
<b>STATE_SPON_IND</b>	<b>VARCHAR2 1</b>	<b>APPROPRIATION</b>
<b>STATISTICAL_DATA_1</b>	<b>VARCHAR2 9</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>STATISTICAL_DATA_2</b>	<b>VARCHAR2 9</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>STOP_PAY_IND</b>	<b>VARCHAR2 1</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>

<b>SYSTEM_CODE</b>	VARCHAR2 1	ACCT_CLASS_SUMMARY FUNDING_TRANS FUND_USE_TRANS GL_SUMMARY MASS_CHANGE OTHER_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS ACS_DOCSUM ACS_FUT
<b>TBL_ID</b>	VARCHAR2 3	MASS_CHANGE
<b>TC_STATUS_CODE</b>	VARCHAR2 1	FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>TEMP_TBLS</b>	VARCHAR2 25	MIR_USER
<b>TEMP_TBLS_QUOTA</b>	VARCHAR2 25	MIR_USER
<b>TERM_USER_ID</b>	VARCHAR2 8	AGENCY_TABLE APPROPRIATION COST_CTR_TABLE FUNDING_TRANS FUND_CNTL FUND_USE_TRANS INVEST_TRK_MODULE MASS_CHANGE OBJECT_CLASS OTHER_TRANS PROGRAM_ELEMENT ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS
<b>TERMS_CNTL_NUM</b>	NUMBER 10	FUND_USE_TRANS (K1) TERMS
<b>TERMS_DAY</b>	NUMBER 2	TERMS
<b>TERMS_NET</b>	NUMBER 2	TERMS
<b>TERMS_PERCENT</b>	NUMBER 5	TERMS
<b>TIME_FRAME</b>	DATE	Stats
<b>TOT_FT_CHG</b>	NUMBER 10	MASS_CHANGE
<b>TOT_FUT_CHG</b>	NUMBER 10	MASS_CHANGE

<b>TOT_GLD_CHG</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>TOT_GLS_CHG</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>TOT_OT_CHG</b>	<b>NUMBER</b>	<b>10</b>	<b>MASS_CHANGE</b>
<b>TOTAL_BILL_AR</b>	<b>NUMBER</b>	<b>15.2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>TOTAL_LOAN_COMMIT</b>	<b>NUMBER</b>	<b>15.2</b>	<b>INVEST_TRK_MODULE</b>
<b>TOTAL_REVENUE</b>	<b>NUMBER</b>	<b>15.2</b>	<b>ACCT_CLASS_SUMMARY DOCUMENT_SUMMARY FUND_USE_TRANS</b>
<b>TRACKING_CONTRACT_DATE</b>	<b>DATE</b>		<b>INVEST_TRK_MODULE</b>
<b>TRANS_CNTL_NUM</b>	<b>NUMBER</b>	<b>10</b>	<b>(K1) FUNDING_TRANS (K1) FUND_USE_TRANS GL_DETAIL (K1) OTHER_TRANS (K1) VENDOR ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>TRANS_SEQ_NUM</b>	<b>NUMBER</b>	<b>7</b>	<b>FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>TRANSACTION_CODE</b>	<b>NUMBER</b>	<b>3</b>	<b>FUNDING_TRANS FUND_USE_TRANS ALL_TRANS FUND_USE_GL FUNDING_GL GL_TRANS FUND_PAY VEND_TRANS</b>
<b>TRANSACTION_INDICATOR</b>	<b>VARCHAR2</b>	<b>1</b>	<b>INVEST_TRK_MODULE</b>
<b>TRANSFER_DATA</b>	<b>VARCHAR2</b>	<b>44</b>	<b>FUND_USE_TRANS ALL_TRANS FUND_USE_GL GL_TRANS FUND_PAY VEND_TRANS</b>

<b>TRAVEL_DATE</b>	<b>DATE</b>	<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>TREAS_ACCT</b>	<b>VARCHAR2 4</b>	<b>STANDARD_GL</b>
<b>TREAS_APPROP_PRE</b>	<b>VARCHAR2 2</b>	<b>APPROPRIATION</b>
<b>TREAS_APPROP_SYMBOL</b>	<b>VARCHAR2 4</b>	<b>APPROPRIATION</b>
<b>TREAS_APPROP_YEAR</b>	<b>CHAR 1</b>	<b>APPROPRIATION</b>
<b>TREASURY_SYMBOL</b>	<b>VARCHAR2 16</b>	<b>APPROPRIATION</b>
<b>TYPE_APPROP</b>	<b>VARCHAR2 1</b>	<b>APPROPRIATION</b> <b>FUND_USE_TRANS</b> <b>OTHER_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>TYPE_OF_ASSISTANCE</b>	<b>VARCHAR2 1</b>	<b>APPROPRIATION</b>
<b>UNBILL_ACC</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>UNDEL_ORDER</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b> <b>ACS_DOCSUM</b> <b>ACS_FUT</b>
<b>UNFD_MATL_COST</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>UNFD_OTHER_COST</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>UNFLD_CUST_ORDER</b>	<b>NUMBER 15.2</b>	<b>ACCT_CLASS_SUMMARY</b> <b>DOCUMENT_SUMMARY</b> <b>FUND_USE_TRANS</b>
<b>UNLOAD_DATE</b>	<b>DATE</b>	<b>Stats</b>
<b>USED_TABLESPACE</b>	<b>NUMBER 9</b>	<b>Stats</b>
<b>USER_ID</b>	<b>VARCHAR2 8</b>	<b>(K1)MR_USER</b> <b>SECU_ACC</b>

<b>USER_TBLS</b>	<b>VARCHAR2</b>	<b>26</b>	<b>MIR_USER</b>
<b>USER_TBLS_QUOTA</b>	<b>VARCHAR2</b>	<b>27</b>	<b>MIR_USER</b>
<b>VEND_TYPE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>VENDOR</b>
<b>VENDOR</b>	<b>VARCHAR2</b>	<b>35</b>	<b>VENDOR</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>VENDOR_ID_1099</b>	<b>VARCHAR2</b>	<b>1</b>	<b>VENDOR</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>VENDOR_NUMBER</b>	<b>VARCHAR2</b>	<b>9</b>	<b>INVEST_TRK_MODULE</b>
<b>VENDOR_SSN</b>	<b>VARCHAR2</b>	<b>9</b>	<b>VENDOR</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>VENDOR_TYPE</b>	<b>VARCHAR2</b>	<b>1</b>	<b>INVEST_TRK_MODULE</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>
<b>VESSEL_COST</b>	<b>NUMBER</b>	<b>15. 2</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_DESCRIPTION</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_GROUP</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_NAME</b>	<b>VARCHAR2</b>	<b>40</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_NUMBER</b>	<b>VARCHAR2</b>	<b>10</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_SEGMENT</b>	<b>VARCHAR2</b>	<b>10</b>	<b>INVEST_TRK_MODULE</b>
<b>VESSEL_SHORT_NAME</b>	<b>VARCHAR2</b>	<b>4</b>	<b>INVEST_TRK_MODULE</b>
<b>WAREHOUSE_DATE</b>	<b>DATE</b>		<b>FUND_USE_TRANS</b> <b>ALL_TRANS</b> <b>FUND_USE_GL</b> <b>GL_TRANS</b> <b>FUND_PAY</b> <b>VEND_TRANS</b>

# Appendix D

## Unique Fields for Individual Views/Tables

**NOTE:** These unique fields should be utilized when joining two or more tables in a query.

VIEW NAMES	UNIQUE FIELD(S)
ACCT_CLASS_SUMMARY	ACS_CNTL_NUM
ACS_DOCSUM	ACS_CNTL_NUM
ACS_FUT	ACS_CNTL_NUM
AGENCY	AGY_CODE, RGN_DIST
APPROPRIATION	AGY_CODE, APPROP_CODE, APPROP_CODE_LIM
BANK	BANK_ID
COST_CENTER	AGY_CODE, RGN_DIST, COST_CENTER
DOCUMENT_SUMMARY	DOC_CNTL_NUM
FUND_CONTROL	AGY_CODE, RGN_DIST, APPROP_CODE, APPROP_CODE_LIM, ALLOT_FUND_CNTL, ALLOT_LEVEL_IND, PROGRAM_ELEMENT, COST_CENTER, OBJECT_CLASS
FUND_USE_TRANS	TRANS_CNTL_NUM
FUNDING_TRANS	TRANS_CNTL_NUM
GL_DETAIL	GL_CNTL_NUM
GL_SUMMARY	GL_CNTL_NUM
INVEST_TRK_MODULE	AGY_CODE, RGN_DIST, DOC_ID
OBJECT_CLASS	AGY_CODE, OBJECT_CLASS
PROGRAM_ELEMENT	AGY_CODE, APPROP_CODE, PROG_ELEMENT
STANDARD_GL	GL_ACCT
TERMS	TERMS_CNTL_NUM
VENDOR	TRANS_CNTL_NUM

# Appendix E

## Indexes and Primary Keys

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**NOTE:** Indexes are also used by Compound Views such as Vend\_Trans and All\_Trans. The most efficient index from fund\_use\_trans or vendor would be utilized for those views.

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ACCT CLASS SUMMARY INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_ACS_ACS#_FY	ACCT_CLASS_SUM	ACS_CNTL_NUM, FIS_YEAR
IDX_ACS_AGY_RGN_CC	ACCT_CLASS_SUM	AGY_CODE, RGN_DIST, COST_CENTER
IDX_ACS_AGY_RGN_OC	ACCT_CLASS_SUM	AGY_CODE, RGN_DIST, OBJECT_CLASS
IDX_ACS_AGY_RGN_PE	ACCT_CLASS_SUM	AGY_CODE, RGN_DIST, PROGRAM_ELEMENT
IDX_ACS_AGY_RGN_PROJ#	ACCT_CLASS_SUM	AGY_CODE, RGN_DIST, PROJECT_NUMBER
UN_ACS_1	ACCT_CLASS_SUM	AGY_CODE, RGN_DIST, APPROP_CODE, APPROP_CODE_LIM, ALLOT_FUND_CTL, PROGRAM_ELEMENT, COST_CENTER, OBJECT_CLASS, SYSTEM_CODE, MAC_CODE, SOURCE_CODE, PROJECT_NUMBER, PLAN_LEVEL2_IND, PLAN_LEVEL3_IND, PUBLIC_GOVT_IND, FIS_YEAR

#### AGENCY INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_AGNY_AGY_RGN	AGENCY	AGY_CODE, RGN_DIST
IDX_AGNY_ANAME	AGENCY	AGENCY_NAME

#### APPROPRIATION INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_APPROP_AGY_APPR_LIM	APPROPRIATION	AGY_CODE, APPROP_CODE, APPROP_CODE_LIM
IDX_APPROP_AGY_APPR_NAM	APPROPRIATION	AGY_CODE APPROP_CODE_NAME
IDX_APPROP_AGY_FT	APPROPRIATION	AGY_CODE, FUND_TYPE
IDX_APPROP_AGY_PREFIX	APPROPRIATION	AGY_CODE, TREAS_APPROP_PRE
IDX_APPROP_AGY_SYMBL	APPROPRIATION	AGY_CODE, TREAS_APPROP_SYMB
IDX_APPROP_AGY_SYMBOL	APPROPRIATION	AGY_CODE TREASURY_SYMBOL

#### BANK INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_BNK_BANKID	BANK	BANK_ID
IDX_BNK_BNAME	BANK	BANK_ADDRESS_NAME

#### COST CENTER INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_CC_AGY_RGN_CC	COST_CENTER	AGY_CODE, RGN_DIST, COST_CENTER_CODE
IDX_CC_AGY_RGN_CCNAME	COST_CENTER	AGY_CODE, RGN_DIST, COST_CENTER_NAME

#### DOCUMENT SUMMARY INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_DOC_DOC#	DOCUMENT_SUMMARY	DOC_CNTL_NUM
IDX_DOC_ACS#	DOCUMENT_SUMMARY	ACS_CNTL_NUM
IDX_DOC_2	DOCUMENT_SUMMARY	AGY_CODE, RGN_DIST, DOC_TYPE, DOC_FIS_YEAR, DOC_NUMBER, DOC_SUFFIX

#### FUND CONTROL INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_FND_CNTL_1	FUND_CONTROL	AGY_CODE, RGN_DIST, APPROP_CODE, APPROP_CODE_LIM, ALLOT_FUND_CNTL, ALLOT_LEVEL_IND, PROGRAM_ELEMENT

#### FUNDING TRANS INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_FT_TRANS#	FUNDING_TRANS	TRANS_CNTL_NUM
IDX_FT_2	FUNDING_TRANS	AGY_CODE, RGN_DIST, DOC_TYPE, DOC_FIS_YEAR, DOC_NUMBER, DOC_SUFFIX
IDX_FT_ACS#	FUNDING_TRANS	ACS_CNTL_NUM
IDX_FT_DOC#	FUNDING_TRANS	DOC_CNTL_NUM
IDX_FT_IAGY_IRGN_USER	FUNDING_TRANS	INPUT_AGY_CODE, INPUT_RGN_DIST, TERM_USER_ID
UN_FT_1	FUNDING_TRANS	INPUT_AGY_CODE, INPUT_RGN_DIST, BATCH_ID, TRANS_SEQ_NUM, AMOUNT, PROCESS_DATE

#### FUND USE TRANS INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_FUT_TRANS#	FUND_USE_TRANS	TRANS_CNTL_NUM
IDX_FUT_3	FUND_USE_TRANS	AGY_CODE, RGN_DIST, DOC_TYPE, DOC_FIS_YEAR, DOC_NUMBER, DOC_SUFFIX
IDX_FUT_7	FUND_USE_TRANS	AGY_CODE, RGN_DIST, APPROP_CODE, BATCH_ID, PROCESS_DATE,
IDX_FUT_ACS#	FUND_USE_TRANS	ACS_CNTL_NUM
IDX_FUT_AGY_RGN_PRCDTE	FUND_USE_TRANS	AGY_CODE, RGN_DIST, PROCESS_DATE
	FUND_USE_TRANS	DOC_CNTL_NUM, BATCH_ID
IDX_FUT_DOC_INV	FUND_USE_TRANS	DOC_CNTL_NUM, INV_CUST_ACC_NUM,
IDX_FUT_DOC_USER	FUND_USE_TRANS	DOC_CNTL_NUM, TERM_USER_ID

INDEX NAME	VIEW NAME	SORT ORDER
IDX_FUT_IAGY_IRGN_SCH	FUND_USE_TRANS	INPUT_AGY_CODE, INPUT_RGN_DIST, SCHEDULE_CERT_DEP
IDX_FUT_IAGY_IRGN_USER	FUND_USE_TRANS	INPUT_AGY_CODE, INPUT_RGN_DIST, TERM_USER_ID
IDX_FUT_TERMS#	FUND_USE_TRANS	TERMS_CNTL_NUM
UN_FUT_1	FUND_USE_TRANS	INPUT_AGY_CODE< INPUT_RGN_DIST, BACH_ID, TRANS_SEQ_NUM, AMOUNT, PROCESS_DATE

#### GENERAL LEDGER DETAIL INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_GLD_GL#_FYM	GL_DETAIL	GL_CNTL_NUM
		FIS_YEAR_MONTH
IDX_GLD_TRANS#	GL_DETAIL	TRANS_CNTL_NUM

#### GENERAL LEDGER SUMMARY INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_GLS_GL#_FYMO	GL_SUMMARY	GL_CNTL_NUM, FIS_YEAR_MONTH
UN_GLS_ACS#_AC_FYMO	GL_SUMMARY	ACS_CNTL_NUM, GL_ACCT, FIS_YEAR_MONTH
IDX_GLS_2	GL_SUMMARY	AGY_CODE, RGN_DIST, APPROP_CODE, APPROP_CODE_LIM, ALLOT_FUND_CNTL, GL_ACCT
IDX_GLS_3	GL_SUMMARY	AGY_CODE, RGN_DIST, GL_ACCT, APPROP_CODE
IDX_GLS_4	GL_SUMMARY	GL_ACCT, AGY_CODE, RGN_DIST, APPROP_CODE, APPROP_CODE_LIM, ALLOT_FUND_CNTL
IDX_GLS_AGY_RGN_CC	GL_SUMMARY	AGY_CODE, RGN_DIST, COST_CENTER

#### INVESTMENT TRACKING MODULE INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_ITM_AGY_RGN	INVEST_TRK_MODULE	AGY_CODE, RGN_DIST

#### OBJECT CLASS INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_OC_AGY_OCNAME	OBJECT_CLASS	AGY_CODE, OBJ_CLASS_NAME
IDX_OC_AGY_TBL	OBJECT_CLASS	AGY_CODE, OBJECT_CLASS

#### OTHER TRANSACTION INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_OT_ACS#	OTHER_TRANS	ACS_CNTL_NUM
IDX_OT_AGY_RGN_APPR	OTHER_TRANS	AGY_CODE, RGN_DIST, APPROP_CODE
IDX_OT_IAGY_IRGN_USER	OTHER_TRANS	AGY_CODE< RGN_DIST< TERM_USER_ID
PK_OTHTRAN-TRANS#	OTHER_TRANS	TRANS_CNTL_NUM

#### PROGRAM ELEMENT INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_PE_1	PROGRAM_ELEMENT	AGY_CODE, APPROP_CODE, PROGRAM_ELEMENT
IDX_PE_PENM	PROGRAM_ELEMENT	PROG_ELEM_NAME

#### STANDARD GENERAL LEDGER INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
IDX_STDGL_AC	STANDARD_GL	GL_ACCT
IDX_STDGL_GLNAME	STANDARD_GL	GL_ACCT_NAME

#### TERMS INDEXES

INDEX NAME	VIEW NAME	SORT ORDER
PK_TERMS_TERMS#	TERMS	TERMS_CNTL_NUM

**VENDOR**

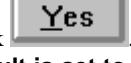
<b>INDEX NAME</b>	<b>VIEW NAME</b>	<b>SORT ORDER</b>
PK_VEND_TRANS#	VENDOR	TRANS_CNTL_NUM
IDX_VEND_1	VENDOR	AGY_CODE, RGN_DIST, VEND_TYPE, VENDOR_SSN
IDX_VEND_AGY_ADDRNM	VENDOR	AGY_CODE, ADDRESS_NAME
IDX_VEND_BNK#	VENDOR	BANK_ID
IDX_VEND_TRNS_NAME	VENDOR	TRANS_CNTL_NUM, ADDRESS_NAME, TRANS_CNTL_NUM, VEND_TYPE, VENDOR_SSN

# Appendix F

## Installation Instructions for the Network Administrator/PC Trouble Shooter

Use the following steps for installation:

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 1	Check with your communication personnel for type of NETWORK being used (Microsoft® Windows NT, NOVELL, DOS LAN, etc.).	
Step 2	Determine which operating system is being used on the client (your PC). Click on <b>HELP</b> in the <i>Menu Bar</i> of the Program Manager Window. Click on <b>About Program Manager</b> .	A dialog box will appear showing which operating system is being used (Microsoft®Windows NT, Microsoft®Windows For Workgroups, Microsoft®Windows Version 3.11, 3.1 or 3.0)
Step 3	Determine if SQL_NET has been installed. If Oracle <u>Installer</u> is installed, click on  Oracle Installer (usually in an Oracle Group) and determine installed components. <b>or:</b> Click on the <b>MAIN</b> group in the Program Manager Window.  Double-click <b>Prompt</b> . At the DOS prompt, type <b>path</b> and press <b>Enter</b> . Check the path for <b>orawin\bin</b> .	If found, SQL_NET may already be installed. If it is, <i>find out why</i> . IPPS may be set up using SQL_NET version 1.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 3 (con't)	 <b>STOP</b> Call communications for help. It may be necessary to deinstall SQL.NET and redo the <b>TNSNAMES.ORA</b> file or add a paragraph to the <b>TNSNAMES.ORA</b> file. Type <b>exit</b> and press <b>Enter</b> to return to windows.	
Step 4	If Oracle Installer is not installed, from the <b>SQL_NET_CD</b> , under <b>windows\install</b> , run <b>orainst.exe</b> . Four dialog boxes will appear with the following questions:  (1) <b>Language?</b> : Select desired language.  Click <b>OK</b> .  (2) <b>Customer Name?</b> : Type DOT or your agency name/code. Click  Click <b>OK</b> .  (3) <b>Default Dir?</b> : Type C:\ORAWIN.  Click <b>OK</b> .  (4) <b>Configuration?</b> : Select Update  Autoexec.bat. Click <b>Yes</b> . <b>NOTE: The Default is set to "NO"; be sure to click on "YES".</b> <b>Install</b> while pressing the <b>CTRL KEY</b> : <b>ORACLE TCP/IP ADAPTER</b> <b>REQUIRED SUPPORT FILES (7.0)</b> <b>REQUIRED SUPPORT FILES (7.1)</b> <b>SQL*NET</b>	When installing ORACLE TCP/IP, an additional screen will come up to select the TCP/IP drivers. From the information gained in Step 1, select: <b>Microsoft NT TCP/IP</b> or <b>Microsoft Windows for Workgroups TCP/IP</b> or <b>FRONTIER SUPER-TCP</b> or <b>NOVELL LAN WORKPLACE</b> or one of the 26 or so others as required.

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 5	<p>Determine if <b>WIN32S</b> has been installed (unless using NT from Step 2).</p> <p>Click on the <b>MAIN</b> group in the <b>Program Manager Window</b>.</p>  <p>Double-click <b>File Manager</b>.</p> <p>Look for the <b>WIN32S</b> directory. If it is found, <b>WIN32S</b> is already installed.</p> <p>If <b>WIN32S</b> has not been installed, execute the <b>setup.exe</b> from the <b>SQL_NET CD</b> under <b>win32s\disk1</b>.</p>	
Step 6	<p>Copy <b>TNSNAMES.ORA</b> and <b>SQLNET.ORA</b> from the <b>MIRFILES diskette</b> to <b>c:\orawin\network\admin</b></p> <p>After the files are copied, use</p>  <p><b>Notepad</b> (or some other editor) to edit the <b>SQLNET.ORA</b> file to ensure that the crypto seed is unique.</p> <p>Save the file.</p>	<p>Copies of these files are shown below (Example 1).</p> <p>See file print of <b>sqlnet.ora</b> file below. It is recommended that positions 5-8 be changed to the phone extension where the personal computer is located. For example, if the phone extension is 8923, change the 5184 in position 5-8 of the <b>CRYPTO_SEED</b> to 8923. The <b>CRYPTO_SEED</b> would then be '3315<b>8923</b>713215540464'.</p>
Step 7	<p>Install <b>ODBC</b>:</p> <p>Create subdirectory such as <b>ODBC7</b> under <b>WINDOWS\SYSTEM</b>.</p> <p>Copy <b>ODBC7.EXE</b> from the <b>MIRFILES diskette</b> to this subdirectory.</p> <p>Go to the <b>DOS PROMPT</b> and change directory to <b>C:\WINDOWS\SYSTEM\ODBC7</b>.</p> <p>Type '<b>odbc7 -d</b>'.</p> <p>Return to <b>Windows</b> and execute the setup under the <b>ODBC7</b> directory.</p> <p>Select <b>ORACLE 7, DATA SOURCE, ORACLE 7</b>.</p>	

STEP	WHAT YOU DO	COMMENTS/PROMPTS
Step 7 (con't)	<p>In the dialogue boxes, type <b>DAFIS MIR / DW</b></p> <p><b>DAFIS MIR DATA WAREHOUSE</b></p> <p>or</p> <p><b>ORACLE 7 ODBC Data Source crft.world</b></p>	
Step 8	<p>Install <b>DAFIS MIR HELP</b> system from disk or web site.</p> <p>Click on <b>FILE</b> in the <i>Menu Bar</i> of the <b>Program Manager Window</b>. Select <b>RUN, Browse, Drive A:, MIR_HELP</b> and execute the <b>setup.exe</b> file.</p>	
Step 9	<p>Ensure that <b>VIRTUAL MEMORY</b> is set up.</p> <p>Click on the <b>MAIN</b> group in the <b>Program Manager Window</b>.</p>  <p>Double-click <b>Control Panel</b>, then  <b>Enhanced</b>. Select <b>VIRTUAL MEMORY</b>.</p> <p>If the Swap File settings are as set as required above, click  and return to the <b>Program Manager Window</b>.</p> <p>If the settings are not set as required above, click  . Under <b>NEW SWAP FILE</b> settings, select drive (probably C), select <b>PERMANENT</b> as Type. <b>NEW SIZE</b> should equal at least 20,480. Turn on (X should show in check box) <b>32-BIT DISK ACCESS</b> and <b>USE 32-BIT FILE ACCESS</b>.</p>  <p>Click </p>	<p><b>VIRTUAL MEMORY</b> is set if <b>SWAP FILE</b> settings are set to a drive, size is set, type equals permanent, and disk access is set to 32-bit access.</p>
Step 10	<p>Return to the <b>Program Manager Window</b> and check commonly used applications to ensure they still work properly.</p>	
Step 11	<b>REBOOT SYSTEM!</b>	

## EXAMPLE 1

File print of the **SQLNET.ORA** and **TNSNAMES.ORA** located under the **c:\orawin\network\admin** directory.

```
#####
# Filename.....: sqlnet.ora
# Name.........: crft.world
# Date.........: 20-JUL-95 09:11:57
#####
AUTOMATIC_IPC = off
TRACE_LEVEL_CLIENT = OFF
SQLNET.EXPIRE_TIME = 2147483647
NAMES.DEFAULT_DOMAIN = world (If you have a local Oracle database, leave
out)
NAME.DEFAULT_ZONE = world (If you have a local Oracle database, leave
out)
SQLNET.CRYPTO_SEED = "33155184713215540464"
use_dedicated_server=on
trace_file_client = sqlnet
log_file_client = sqlnet
trace_directory_client=C:\ORAWIN\network\trace
log_directory_client=C:\ORAWIN\network\log

#####
# Filename.....: tnsnames.ora
# Name.........: LOCAL_REGION.world
# Date.........: 20-JUL-95 09:11:57
#####
crft.world =
(DESCRIPTION =
(ADDRESS_LIST =
(ADDRESS =
(COMMUNITY = crft.world)
(PROTOCOL = TCP)
(Host = 162.58.29.153)
(Port = 1521)
)
)
)
(CONNECT_DATA =
(SID = crft)
(GLOBAL_NAME = crft.world)
)
)
```

## Frequently Asked Questions About Installation

When All Else Fails.....

If running LAN DOS and the file “wlibsock.dll” is not found, it can be copied from the MIR FILES diskette to orawin\bin.

Use the ping utility to ping ip address 162.58.29.153. If the ping works, TCP/IP communications are working.

Use the ODBC test to connect to crft.world. If connection is made, the MIR system is up.

If Netmanage (Chameleon) TCP/IP is being used, the host file may not be setup. Select custom, services, and host file and set up the host name (crft.world).

If an Internet browser (Such as Netscape, Internet Explorer, Mosaic, or Internet Works) or Attachmate Extra! For Windows have been recently loaded they may load a file “windsock.dll” and change the path statement in the “autoexec.bat”. This may conflict with DAFIS MIR / DW access and the file needs to be renamed, also c:\orawin\bin needs to be near the first of the path statement.

Contact the MIR Team to help you. (Please refer to Section 5.5. Team Member Names and Numbers:.)

# Glossary of Terms

## **Allotment Control File (ACF)**

This file provides the current status of funds at the fund authority, fund use, and fund realization stages. Information from this file is stored as a table/view in the DAFIS MIR D / W.

## **Batch Control File (BCF)**

Batches created during one business day are housed in this file until overnight processing is complete. Information from this file is stored as a table/view in the DAFIS MIR D / W.

## **Beta Test**

A thorough analysis of a software package in a production environment using actual transactions.

## **Block**

A group of SQL commands related to one another through procedural logic.

## **Client**

Most often a personal computer. Initiates an action by requesting data from the server.

## **Column**

Data element (field or variable) in a table.

## **Command**

An instruction you give in your application.

## **CRAFTS**

(Centralized Repository of Accounting and Financial Transactions and Summaries)  
The new data warehouse for the Department of Transportation commonly called  
DAFIS MIR / DW.

## **DAFIS**

Departmental Accounting and Financial Information System.

## **DAFIS MIR / DW**

(DAFIS Management Information Reporting / Data Warehouse) A reporting system that allows users to extract summary and transaction level information from the DAFIS Data Warehouse database to be used to meet individual reporting needs.

## **Database**

Group of files that together provide all information available on the entire system.  
A collection of related tables.

## **Fiscal Status File (FSF)**

Contains summary fund usage and program plan information which is accumulated by accounting classification. Information from this file is stored as a table/view in the DAFIS MIR D / W.

## **FOD Table**

Financial Organization Directory Table. Data Elements are Bank-ID, Bank Name, Bank Address, New Bank-ID. Updated monthly from a Treasury tape which contains ACH/EFT bank information. User has inquiry capability only.

## **Foreign Key**

A field in one table that is the primary key (or part of the primary key) in another table.

## **GLU**

(General Load Utility) Used by the database administrator to load information into the DAFIS MIR / DW data warehouse.

## **Group By**

Groups a resultant set of data by the field to which the "group by" is assigned. For instance, if the "group by" is assigned to LIMITATION, the data will be returned with all like limitations together and listed in order of next column heading (Cost Center, Program Element, etc.).

## **GUI**

(Graphic User Interface) A means of access to computer software using data and icons in a bit-mapped (rather than character-based) display which can be manipulated with a mouse or similar device.

## **Index**

A separate list created for a column that provides greater efficiency in sorting or retrieving data queried. Compare to an index in a book.

## **Interface Document File (IDF)**

Holds documents and detail which are still active and have not been purged. Similar to the DOCUMENT\_SUMMARY in the MIR D/W although the data is held longer in the data warehouse.

## **Join**

When two tables have related data, join creates a relationship between the two tables based on common data fields.

## **Link**

Inserting into a worksheet or report information that retains a connection to the source document. Linked data is updated when the data in the source document changes. Linked data is stored in the source file; the worksheet or report stores only the location of the source but displays a representation of the linked data.

## **Merge**

To bring data together whether from two worksheets, two data tables, two databases, etc.

## **Network**

Telecommunications infrastructure allowing cooperative processing.

## **Null**

The value when an actual value is not applicable or unknown.

## **One-to-Many**

A type of join that connects a single field in one table to multiple fields in one or more other tables.

## **One-to-One**

A type of join that connects a single field in one table to a single field in another table.

## **Open Document File (ODF)**

Contains a history of open documents and closed or completed documents which have not been purged. Similar to the DOCUMENT\_SUMMARY in the MIR D/ W although the data is held longer in the data warehouse.

## **Oracle SQL\*Plus**

A software application used in conjunction with the SQL database language. Oracle SQL\*Plus allows you to manipulate SQL commands and perform many additional tasks as well.

## **PAINTS**

(Propagation of Accounting Information/New Transactions) The process that extracts data from the mainframe for use by DAFIS MIR / DW.

## **Primary Key**

The field or group of fields that make the record unique or different than any other.

## **Query**

An SQL command (specifically an SQL SELECT command) that retrieves information from one or more tables.

## **Query Results**

The data retrieved by a query. Also called a result set.

## **RDBMS**

(Relational Database Management System) Furnishes a method for storing and manipulating information about a variety of data and the relationships among this data.

## **Report**

Result set in a logical and meaningful format.

## **Report Identification Symbol (RIS NO)**

The alpha/numeric symbol used to identify DAFIS reports.

## **Result Set**

The data that is returned as a consequence of a query. Also called query results.

## **Row**

A single occurrence of logically related data within a table. Can be thought of as a record.

## **Server**

Provides a service, normally data, to a requesting client.

## **SQL**

(Structured Query Language) A programming language used to extract data from a database server.

## **Table**

A two-dimensional collection of data containing unique columns and rows. Also, the basic unit of storage in ORACLE.

## **View**

A pre-joined result set that is treated logically as a table.

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